

**Original citation:**

Jensen, Eric and Weasel, Lisa H.. (2007) Abortion rhetoric in American news coverage of the human cloning debate. *New Genetics and Society*, 25 (3). pp. 305-323.

**Permanent WRAP URL:**

<http://wrap.warwick.ac.uk/93004>

**Copyright and reuse:**

The Warwick Research Archive Portal (WRAP) makes this work by researchers of the University of Warwick available open access under the following conditions. Copyright © and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable the material made available in WRAP has been checked for eligibility before being made available.

Copies of full items can be used for personal research or study, educational, or not-for profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

**Publisher's statement:**

This is an Accepted Manuscript of an article published by Taylor & Francis in *New Genetics and Society* on 22 January 2007, available online:

<http://www.tandfonline.com/10.1080/14636770601032940>

**A note on versions:**

The version presented here may differ from the published version or, version of record, if you wish to cite this item you are advised to consult the publisher's version. Please see the 'permanent WRAP url' above for details on accessing the published version and note that access may require a subscription.

For more information, please contact the WRAP Team at: [wrap@warwick.ac.uk](mailto:wrap@warwick.ac.uk)

# **Abortion Rhetoric in American News Coverage of the Human Cloning Debate**

Accepted for Publication in *New Genetics and Society*

## *1<sup>st</sup> Author:*

Eric Jensen  
PhD Candidate  
Centre for Family Research  
Faculty of Social and Political Sciences  
University of Cambridge  
Free School Lane  
Cambridge CB2 3RF  
United Kingdom

[jensen@gatesscholar.org](mailto:jensen@gatesscholar.org)

## *2<sup>nd</sup> Author:*

Lisa H. Weasel  
Associate Professor  
Department of Biology  
Portland State University

[lisaw@pdx.edu](mailto:lisaw@pdx.edu)

## Acknowledgments:

This study is based on a Master's thesis in the Department of Communication at Portland State University, and was funded in part by a grant from the National Science Foundation. The authors are very grateful to the brilliant coders for this study: Ben Rowe, Laurie Ledger, and Kate Comiskey.

*Abortion Rhetoric in American News Coverage of the Human Cloning Debate*

*Abstract*

The issue of human cloning has received intense media and political attention since the cloning of Dolly the sheep was announced in 1997. This research explores the discursive basis for support and opposition to human cloning by examining the role of abortion-related rhetoric in constructing the concept of human cloning within the American press. An in-depth content analysis of human cloning news coverage was conducted on a sample of articles collected from the mainstream press as well as advocacy publications with either a pro-science or Christian fundamentalist orientation. Statistically significant differences were found indicating an important role for abortion rhetoric in the human cloning debate. This expansion of abortion rhetoric into the domain of science policy portends a unique and growing problem for resolving bioethical debates within American politics over the future development of biomedical technologies such as human cloning.

*Abortion Rhetoric in American News Coverage of the Human Cloning Debate*

Human cloning is a truly global issue, which has drawn intensive news media attention since the announcement in 1997 that Dolly the sheep was the first mammal cloned from an adult cell. This announcement galvanized public opinion against the idea of human cloning for reproductive purposes and opened up an ongoing debate over whether “therapeutic cloning” using human embryonic stem cells should be permitted. The present study explores the dominant discursive constructions that frame this debate over human cloning within the American press, finding that the issue of abortion has become a central theme in the human cloning debate. Three distinct genres of print news publications were subjected to a comparative content analysis using an unusually in-depth and grounded methodology. This content analysis addressed the research question: What concepts and rhetorical themes dominate mainstream, pro-science, and Christian fundamentalist press coverage of the human cloning debate?

The press constitute a primary forum for public discussions of scientific controversies such as human cloning. However, the print news media in the United States are highly diverse. This study will focus on the mainstream (e.g. *Time*, *Newsweek*, *USA Today*), science advocacy (e.g. *Popular Science*), and Christian evangelical (i.e. fundamentalist) genres within the American press. Each of these press categories are of particular concern in the human cloning debate. The mainstream press is *the* principal battleground that must be won over by ideologues on either side of the debate (e.g. Ferree, Gamson, Gerhards, & Rucht, 2002, p. 10). In general, science advocacy publications have a clear perspective favoring the development of new scientific and biomedical technologies. Typically ambivalent with regard to many new developments in the life sciences, Christian evangelical publications based in the US tend to

oppose human cloning and embryonic stem cell research on moral grounds. The unanswered question regarding this latter group is why they are so passionate and united in their opposition to a technology such as human cloning that is not directly addressed in their holy text. Thus a goal for the present study is to understand the conceptual and discursive basis of Christian fundamentalist opposition to human cloning through an analysis of their major print news publications, compared against the alternative rhetorical themes in the other news genres.

With the electoral success of American President George W. Bush, the influence of the powerful, and largely fundamentalist, force in American politics known as the Christian Right continues to rise in importance (see Hopson & Smith, 1999). The Christian Right ascended to political prominence in the 1980s through social movements such as Jerry Falwell's Moral Majority, which were based on opposition to aspects of society that were viewed as corrupting and secularizing (e.g., abortion, pornography, gay rights, and promiscuous sexuality). Since then, influential evangelical (i.e., fundamentalist) Christian organizations have continued to wield an enormous amount of power as a result of their nearly unanimous positioning on many issues and the sheer size of their membership (Ammerman, 1991; Boone, 1989; Bruce, 1992; Hopson & Smith, 1999; Wilcox, 2000), which is estimated at around 30% of the US population (Woodberry & Smith, 1998). This hegemonic influence on American politics is certainly a topic worthy of study and the salience, complexity, and multivalent nature of the human cloning debate makes it an attractive case study in the application of this influence to a particular policy domain (Nelkin & Lindee, 2001; Priest, 2001; van Dijk, 1998). Moreover, religious leaders have been given a particularly large role in the ethical debate over human cloning as government-recognized representatives of the public's views on the topic (Evans, 2002a).

For decades, one of the most important issues for American evangelicals has been abortion. Unlike most Western nations, the US did not resolve the issue of abortion rights through democratic debate and a vote by elected representatives. Rather, the *Roe v. Wade* ruling by the US Supreme Court in 1973 established the principle of legalized abortion as a constitutional right. Some have argued that this abrupt judicial intervention forestalled a democratic, political resolution to the debate. This may explain the sustained intensity of the abortion debate in the US, which tends to flare during presidential campaigns and confirmation hearings for new Supreme Court justices. Meanwhile other Western nations have seen this debate subside following more traditional legislative resolutions to the abortion issue (e.g. Ferree et al., 2002).

While previous studies have shown the importance of abortion rhetoric in mainstream news media at the level of the nation (e.g. Ferree et al., 2002), this literature does not address the dynamic variations of abortion rhetoric in different news genres within the national press. Moreover, there are no systematic studies of how and to what degree the abortion issue has expanded into other policy areas such as human cloning. Although abortions and human cloning take place within distinct institutional contexts, the present study indicates significant conceptual blending in the rhetorical construction of human cloning within evangelical and mainstream news publications. This study employs an unusually in-depth approach to uncovering the details of this rhetorical pattern, indicating the extent to which the unresolved issues associated with abortion may reverberate in other policy domains.

## METHOD

The first level of analysis in this study was to inductively develop codes based on a qualitative examination of the data. Subsequently, the main phase of the study used these codes as the basis of a quantitative content analysis conducted by three trained student coders. As indicated by this mixed methods approach, this study aimed to incorporate methodological insights from both the qualitative and quantitative traditions. Moreover, aspects of both traditions are combined at several points in this study in the spirit of “complimentary assistance” with the goal of improving the study’s validity (Morgan, 1998, in press; cf., Patton, 1988; Reichardt & Cook, 1979).

Following the initial qualitative examination of the data, it became clear that abortion was a central issue underlying much of the press debate over human cloning within Christian fundamentalist press coverage. Consequently, the quantitative analysis paid careful attention to abortion-related rhetoric. In the end, abortion rhetoric emerged as such a central theme that this article has been framed around the “*human cloning is abortion*” conceptual metaphor (see Lakoff, 1993; Lakoff & Johnson, 1980), which was frequently activated implicitly through abortion-related rhetorical devices, also known as “tropes” (see Lanham, 1991). Lakoff and Johnson argued that abstract concepts are largely understood on the basis of ‘conceptual metaphors’ such as “life is a journey” in which the source domain of meaning (i.e. ‘journey’) is mapped onto the abstract concept (i.e. ‘life’) in order to make the abstract more concrete and intelligible (Ritchie, 2003; Vervaeke & Kennedy, 1996). They argue that such concept mapping is particularly important to the understanding of concepts which are either intangible (e.g. ‘love’) or with which we have no direct personal experience (e.g. human cloning).

Within this general theoretical context, the more specific emergent research question which is addressed in the remainder of this article is: How and to what extent is abortion rhetoric involved in the construction of the human cloning debate within mainstream, pro-science, and Christian fundamentalist press coverage? One way this question can be envisioned is with reference to a hypothetical Venn diagram composed of concentric circles representing the various concepts involved in the human cloning debate. In this diagram, the central concept of ‘human cloning’ per se would be overlapped by a variety of other concepts such as ‘xerox copying’, ‘Frankensteinian monsters’, ‘mad science’ (Nerlich, Clarke, & Dingwall, 2000), and ‘abortion’. The task for the present study is to establish the degree to which rhetoric associated with the conceptual domain of abortion has been mapped onto human cloning. In addition, this study indicates the particular rhetorical elements that are being transposed to human cloning from within the abortion domain. This focus on the underlying conceptual level of overlapping domains of meaning eschews a concern for more superficial questions regarding the degree to which the coverage of human cloning was favourable or unfavourable in various press genres, and this is reflected in the methodology described below.

### *Data Collection*

#### *Data Sources*

The three major American news periodicals and two national newspapers comprised the initial pool of articles from which the “mainstream” sample was selected. These five publications are not affiliated with any pro- or anti-cloning interest groups. Indeed, they are often highly sensitive to accusations of bias or unfair use of language with regard to controversial issues such as abortion. The “pro-science” sample includes publications that aim to report on science news



and issues in a manner that is accessible to the lay reader with an interest in science. These publications occupy a role largely defined by their position between the scientific journals and the general, mainstream news media in the broader continuum of mass media publications. In general, these pro-science publications frame their news in a way that advocates for science and research without undue restrictions. “Christian fundamentalist” publications were selected based on whether they professed a commitment to the inerrancy of the Bible and its position as the fundamental source of all truth (Barr, 1978; Bartkowski, 1996; Lehmann, 1998). For example, *World* magazine’s mission statement: “To report and analyze the news on a weekly schedule in an interesting, accurate, and arresting fashion, and to combine reporting with practical commentary on current events and issues from a perspective committed to the Bible as the inerrant Word of God.” All of the publications representing the Christian fundamentalist category except for *Christianity Today* were electronically accessed through their official web pages on the internet. Articles from all other sample publications were gathered using the electronic databases *Lexis-Nexis Academic Universe* and *EBSCOhost*.

**Table 1: Distribution of articles in sample amongst publications**

<b>Publications</b>	<b>Mainstream</b>	<b>Pro-science</b>	<b>Christian</b>
<i>Time</i>	19	-	-
<i>USA Today</i>	18	-	-
<i>US News &amp; W.R.<sup>1</sup></i>	11	-	-
<i>Newsweek</i>	7	-	-
<i>Washington Post</i>	1	-	-
<i>New Scientist</i>	-	21	-
<i>Science</i>	-	11	-
<i>Science News</i>	-	8	-
<i>Science Now</i>	-	8	-
<i>Scientific American</i>	-	3	-
<i>Popular Science</i>	-	2	-
<i>Discover</i>	-	2	-
<i>Christianity Today</i>	-	-	19
<i>World</i>	-	-	17
<i>Baptist Press</i>	-	-	12
<i>CBN News<sup>2</sup></i>	-	-	5
<i>FOF News<sup>3</sup></i>	-	-	3
<b>Total</b>	<b>56</b>	<b>55</b>	<b>56</b>

NOTE: Full titles for abbreviated publications:

<sup>1</sup> = *US News and World Report*; <sup>2</sup> = *Christian Broadcasting Network News* (this is the written news version of what is normally a television news program); <sup>3</sup> = *Focus on the Family News*.

### *Data Screening*

The data from the above publications were carefully screened, limiting the sample to articles focused primarily on human cloning. The results of an electronic “keyword” search using the terms “human cloning,” “human clones,” “cloning,” or “clones” were limited to the time period beginning with the Dolly story in February 1997 and ending in January 2003, well into President Bush’s first term. These articles were thoroughly inspected to exclude any that did not primarily focus on human cloning. The relatively limited data sources that were available for the pro-science sample became the final limiting factor. The pro-science sample represents a complete census of the acceptable articles in those publications. The total *n* was comprised of 167 articles from all three samples.

### *Coders*

Three American university students from the communication studies discipline (two advanced undergraduates and one graduate) were trained to identify rhetorical devices in mass media content. Their training included instruction and independent reading based on the literature on the general topics of implicit communication (Grice, 1975; Sperber & Wilson, 1986) and content analysis, as well as recent literature on metaphor theory and its methodological applications (Lakoff, 1995; Lakoff & Johnson, 1980; Schön, 1993; Vervaeke & Kennedy, 1996).

### *Coding*

The preliminary qualitative analysis of the data pointed to the importance of abortion rhetoric, resulting in a re-orientation towards coding for abortion-related content during the quantitative analysis. While identifying the explicit abortion code was relatively straightforward, implicit abortion-related codes were developed directly from the data, rather than by imposing

inflexible *a priori* coding categories. One of the major advantages of human coders is that they were able to effectively draw out and analyze implicit abortion rhetoric. Through grounded open-coding of the data (Strauss & Corbin, 1990, 1998), four thematic coding categories emerged (see Figure 1).

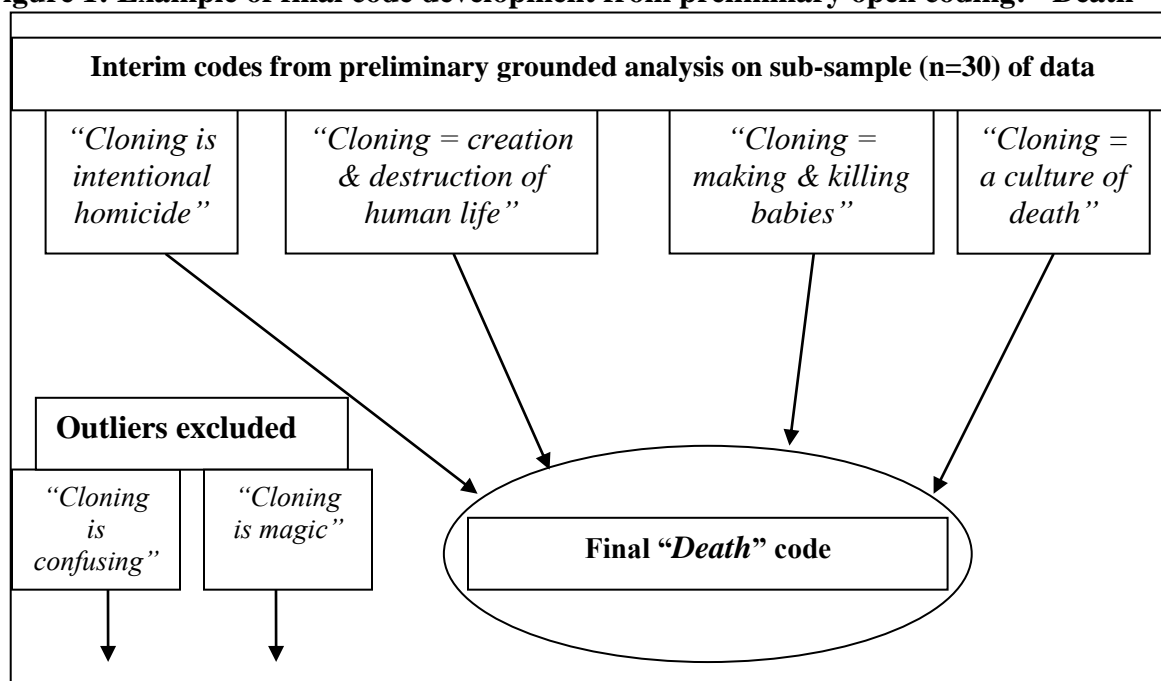
Coders identified abortion-relevant tropes, tallying their frequencies in the data. Each coder read every article, so all the articles were combed for implicit content at least three different times by three different coders. The presence of every data point reported in this study has been marked and confirmed by all three coders individually (with disagreements resolved through discussion). This intense level of scrutiny is atypical for quantitative content analyses. However, this procedure effectively addressed the more latent aspects of the text, which are normally difficult to access in studies of mass media content (Neuendorff, 2002). Although this multiple coding procedure limits sample size<sup>1</sup>, it makes for a more thorough and valid content analysis. With all three coders reaching the same conclusions about the tropes present in the data, despite their dissimilar backgrounds and worldviews, it is reasonable to conclude that such judgments are considerably more reliable than the conclusions of a single coder reading the text with but one perspective. In methodological terms, such use of multiple analysts (ideally from different perspectives or adopting different roles) is known as ‘investigator triangulation’ (Tindall, 1994).

#### *Inter-coder Reliability*

Inter-coder reliability was calculated for this study based on a random sample of 700 cases. The Kappa statistic is considered a good, conservative measure of inter-coder reliability (Lombard, Snyder-Duch, & Bracken, 2002). The random sample yielded a Kappa of .689 ( $p < .001$ ), which shows a highly significant correlation between coders’ ratings and an excellent

level of inter-coder reliability. Raw percent agreement between coders in this sample was 88%, which would be within the normal range, even for a content analysis examining much more manifest content (Lombard et al., 2002).

**Figure 1: Example of final code development from preliminary open coding: "Death"**



### *Implicit Abortion-related Codes*

A description of each implicit abortion code is provided below based on the ways in which they were used in the data. These descriptions are a necessary precursor to understanding the significance and meaning of the research findings which are built upon these codes.

#### *“Death”*

This code includes news content that portrays cloning as resulting in deaths, mass abortions, the destruction of human life and other similar references to death, murder and killing.

#### *“Babies”*

Probably the most difficult of the codes to detect, “*babies*” is a highly implicit trope which includes the metonymic use of such terms as “babies,” “children,” “child,” “tiny human being” and “infant” (For discussion of metonymy, see Lakoff & Johnson, 1980). More specifically, the “*babies*” metonym code is comprised of instances in which one of the above terms is substituted for a generic description of a clone as just a “clone” or a “human.” That is, when the context would normally dictate such a generic term, rhetors in the sample would often go out of their way to label clones as “babies,” with the apparent goal of achieving a better persuasive and/or emotional impact. For example, one Christian fundamentalist article expressed concern that cloning would result in “. . . using human *babies* as the raw material in grisly factories.” “Babies” was functionally unnecessary in expressing this concern (i.e., it could have read, “using embryonic tissue / humans as the raw material. . .”), but it could serve a powerful rhetorical purpose in shaping the negative image one gets from this representation of human cloning.

In addition, given that this trope is often used in the context of discussing what happens to embryos, it can be an extremely value-laden rhetorical device, which turns an unborn embryo

into the prototypical human baby in the reader's mind. This change is highly relevant to abortion rhetoric and the definition of when life begins, as well as to the prescriptions for action that would be required if this line of rhetoric were to be accepted (see T. P. Maxwell, 2003; Schön, 1993).

*“Christian Values”*

Measuring the degree to which writers in the three samples draw on explicitly Christian values in their arguments regarding human cloning, this code is implicit and includes rhetoric such as “cloning violates the very tenets of Christian faith.”

*“Therapy/Cure”*

True to the title, this code refers to claims that “cloning is a therapy,” or that it produces cures<sup>2</sup>. This is probably the most prominently featured pro-cloning argument in the human cloning debate. It holds out the promise of a range of ameliorative cloning benefits from curing debilitating genetic diseases to allowing infertile or homosexual couples more and better reproductive options. In nations such as the United Kingdom, the concept of ‘therapeutic cloning’ is widely understood as unproblematically describing the development of rejection-free therapies using cloned human embryonic stem cells (E. Jensen, In press). However human cloning is so thoroughly contested within the American context that ‘therapeutic cloning’ is viewed as an intrinsically rhetorical term with strong normative implications favoring human cloning. This normative status for the term ‘therapeutic cloning’ is further highlighted by the fact that the coverage in the mainstream and Christian fundamentalist press evidenced a deliberate pattern of conflating the concepts of ‘therapeutic’ and ‘reproductive’ cloning. Proponents of human cloning would sometimes stretch the understanding of therapeutic to include reproductive cloning on the grounds that it would function as a therapy for infertility. At the same time,



opponents of human cloning habitually eschewed the 'therapeutic' / 'reproductive' distinction based primarily upon the 'slippery slope' argument that the development of human cloning for any purpose would inevitably lead to the full range of cloning applications.

**Table 2: Representative quotes for implicit abortion-related human cloning codes<sup>1</sup>**

<i>Rhetorical devices</i>	<i>Representative quote(s) from sample data</i>
<b><i>Death</i><sup>a</sup></b>	“The culture of <i>death</i> ” <sup>*</sup> ; “The <i>loss of countless human lives</i> would be required for a single clone” <sup>***</sup> ; “Cloning to <i>kill</i> ” <sup>***</sup>
<b><i>Babies</i></b>	“... using human <i>babies</i> as the raw material in grisly factories.” <sup>***</sup> ; “Collins argued that scientists ‘are not making <i>babies</i> .’” <sup>***</sup>
<b><i>Christian values</i><sup>a</sup></b>	“Our reasons against cloning human beings ... are moral and <i>theological</i> , not pragmatic.” <sup>***</sup>
<b><i>Therapy/cure</i></b>	“... Use cloning to develop a treatment for Alzheimer’s, Parkinson’s, diabetes or paralysis.” <sup>**</sup> ; “... (cloning) could usher in a <i>new era of therapies</i> ” <sup>*</sup>

NOTE: <sup>1</sup> = Italics added for emphasis throughout table

<sup>a</sup> = statistically significant difference for code between samples ( $p < .05$ ), based on  $\chi^2$  test.

<sup>\*</sup> = quote from Mainstream sample

<sup>\*\*</sup> = quote from Pro-science sample

<sup>\*\*\*</sup> = quote from Christian fundamentalist sample

## RESULTS

The present study examined the extent to which abortion rhetoric dominates American news coverage of the human cloning debate. Before discussing the figures which establish the broad abortion-related patterns in the data, a brief outline of the system that was used to come up with the basic Table 3 results is presented below. In order to obviate potential problems stemming from differences in article length across the samples<sup>3</sup>, the percentages and inferential statistics presented in Table 3 are based on whether a trope appears at least once in an article. Rather than counting the exact number of times a trope appears per article, this form of analysis uses a binary coding system that denotes either that “yes” the trope appeared (coded as “1”), or “no” it did not (coded as “0”).

Clear patterns emerged from the comparative distributions of both explicit and implicit abortion-related codes. Most notable in the present context is the much higher level of abortion and “*death*” tropes in the Christian fundamentalist sample (significant at  $p < .001$ ). This pervasive level of abortion rhetoric in Christian fundamentalist news coverage of human cloning indicates that readers of these publications are getting a significantly different picture of human cloning than consumers of the mainstream and pro-science samples, a picture that is in large part framed by carryover rhetorical devices related to abortion. While mainstream news publications seem to have picked up on the “*death*” frame for human cloning, they have not accepted the application of explicit abortion rhetoric in the same way. This is probably a reflection of the nearly even split in America regarding abortion, as well as the powerful profit motivation of mainstream news organizations which may lead them to avoid using divisive abortion rhetoric in a way that implicitly supports a negative image of abortion (McManus, 1994, 1995).

**Table 3: Frequency of abortion-related rhetorical devices compared by news type**

	<u>Mainstream</u>	<u>Pro-science News</u>	<u>Christian</u>
	<u>News</u>		<u>Fundamentalist</u>
			<u>News</u>
<u>Rhetorical devices</u>	% of articles	% of articles	% of articles
<b>Explicit Abortion***</b>	<b>16<sup>b</sup></b>	<b>9<sup>a</sup></b>	<b>45<sup>ab</sup></b>
<b><i>Death***</i></b>	<b>52<sup>a</sup></b>	<b>24<sup>a</sup></b>	<b>71<sup>a</sup></b>
<b><i>Babies</i></b>	46	38	43
<b><i>Christian values**</i></b>	<b>14<sup>a</sup></b>	<b>5<sup>b</sup></b>	<b>30<sup>ab</sup></b>
<b><i>Therapy/cure</i></b>	52	42	45

NOTE: These figures represent the distribution of abortion-related tropes amongst human cloning news articles.

\* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$  (Based on global, three-sample  $\chi^2$  test)

a, b, c = Statistically significant differences between specific samples ( $p < .05$ ) based on pair-wise  $\chi^2$  tests.

While the “explicit abortion” code provides a straightforward indication of the hegemony that this news frame maintains in Christian fundamentalist coverage of human cloning, the implicit abortion-related codes require a more qualitative explication in order to understand the significance of the results presented in Table 3. Therefore, following a few instructive examples of the explicit abortion code in action, each of the implicit codes is discussed below with regard to the part they play in framing news coverage of the human cloning debate in terms of abortion rhetoric.

### *Explicit Abortion Code*

While the statistics clearly show that explicit references to abortion were a dominant theme in the Christian fundamentalist sample, the full flavour of this code can only be experienced through direct contact with the data. Therefore, a couple of cogent examples are offered below in order to give shape to the explicit abortion trope. Important rhetorical devices are highlighted with italics.

They start today, with Mike West, president of the company that made the big cloning announcement last week. The Los Angeles Times gives a preview: "As a young *evangelical Christian*, Michael D. West would protest outside *abortion clinics*, urging women to consider the value of life growing within them. Today, he will tell a Senate panel why he is now a leading advocate for a far different proposition: cloning humans as a way to cure disease, *even if it means destroying human embryos*. (C-27; Italics added)

A more wide ranging example comes from C-39:

ACT makes a distinction between this type of cloning—called therapeutic cloning—and cloning that would produce a *baby*. Their method uses the genetic material

from patients' own cells to treat illnesses, *they say*, while reproductive cloning should be banned due to "safety and ethical issues."

Few Christian leaders see such a distinction. President George Bush has called the experimentation "morally wrong." The Vatican responded with "unequivocal condemnation" saying that in such research, "the end doesn't justify the means."

Since Sunday, *life ethics watchdog groups* have condemned ACT's work by citing bottom line issues that *embryos are humans* and that *any cloning is immoral*. Most called for an immediate federal ban.

"*The human embryo is a human person created in God's image*," Jennifer Lahl, executive director of the Center for Bioethics and Culture, told Christianity Today. "We strongly support Senator Brownback is his push for legislation and call for a total, outright, complete, full ban on *all cloning*." (C-39; Italics added)

Note that each of these examples has as its underlying assumption the notion that a human embryo is a fully human person, a very controversial claim which has been at the heart of the abortion debate for many years (e.g. C. J. C. Maxwell, 2002).

### *"Death"*

The results show that "*death*" is used significantly more in mainstream articles than in pro-science articles, and more in Christian fundamentalist articles than in either of the other two samples ( $\chi^2 = 25.6$ ;  $p < .001$ ). More than differences in frequency however, the "*death*" trope takes on a qualitatively different form in the Christian fundamentalist publications. Probably the most important qualitative difference is grounded in the tendency for the fundamentalist media to make an implicit connection, equating cloning and abortion. In fact, 45% of the articles in the

Christian fundamentalist sample contained a direct reference to abortion, whereas only 14% of mainstream and 9% of pro-science articles contained such explicit abortion references. This “*death*” quote from the Christian fundamentalist sample merely implies a connection and draws on anti-abortion rhetoric reminiscent of pro-life advocates’ descriptions of the “partial birth abortion” procedure:

"Human cloning creates an embryonic human being—someone in the image of God—for one purpose only. The embryonic human being is killed and 'disaggregated'—a polite way of saying, 'pulled to pieces for medical purposes.' It is barbaric, borders on the cannibalistic, and must be banned."

Although the Christian fundamentalist articles were clearly advocating the view that “*cloning is abortion*,” the “*death*” trope was closely linked to the concept of abortion throughout the mainstream and pro-science samples as well. All three samples showing significant correlations between “*death*” and the explicit abortion code ( $r = .325$  [ $p < .05$ ],  $r = .568$  [ $p < .001$ ],  $r = .329$  [ $p < .05$ ], for mainstream, pro-science and Christian fundamentalist samples respectively).

#### *“Therapy/cure”*

Quantitatively, the use of “*therapy/cure*” appears to be similar across the three samples (it is used in 52% of the mainstream articles, 42% of the pro-science articles, and 45% of the Christian fundamentalist articles). These statistics establish the importance of the “*therapy/cure*” trope as common feature in the press debate. However, there are important qualitative differences between each of the samples which shed light on the different rhetorical purposes enacted by this trope. The therapeutic potential of human cloning was used as a literal argument in support of the technology within the pro-science articles. On the other hand, the appearance of

this trope in Christian fundamentalist articles was more of an indication of their awareness of pro-cloning arguments than of their own support for the technology. In seven percent of the total number of mainstream articles in which “*therapy/cure*” appears, it was used as a “*straw person*”<sup>4</sup>. Only one pro-science article (four percent of the total number of articles in which it appeared) took on a “*straw person*” sub-code. The Christian fundamentalist sample however, twenty-eight percent of the “*therapy/cure*” tropes were assigned “*straw person*” sub-codes, which denote a non-literal use of the rhetorical device that dramatically changes its rhetorical function.

The presence of this many “*straw person*” sub-codes among the Christian fundamentalist articles that used “*therapy/cure*” provides quantitative evidence to support the qualitative observation that the Christian fundamentalist authors in this study did not actually seem to believe that human cloning would be a legitimate source of therapies or cures. They frequently presented the pro-cloning argument that human cloning would result in important cures and medical breakthroughs (typically in the form of quoting a source). However, after setting up this “*straw person*” of unrealistic hopes for cures, they frequently spent much more space refuting therapeutic claims and knocking down the “*straw person*” with counter-arguments. An article in *World* offers an extended example of this “*straw person*” pattern in the Christian fundamentalist data. First, the ostensibly pro-cloning paragraph that appears about a third of the way into the article and cites the head of the Biotechnology Industry Organization:

But Mr. Feldbaum went on to say that his organization strongly supports "therapeutic" cloning, in which scientists create human embryos for medical experimentation. By harvesting cells from these tiny beings, biotech companies believe they can find cures for almost every human malady, from juvenile diabetes to age-related dementia. In the words



of Mr. Feldman: "Therapeutic cloning techniques are central to the production of breakthrough medicines, diagnostics, and vaccines to treat Alzheimer's, diabetes, Parkinson's, heart attacks, various cancers and hundreds of other genetic diseases."

Even within this paragraph, the "*straw person*" sub-code begins to take shape by way of the author's contextualization of Feldbaum's quote in the first two sentences. First, the Christian fundamentalist author describes cloning in superficially neutral terms: "scientists create human embryos for medical experimentation." However, both the idea of scientists "creating" human embryos and the idea of "experimentation" are loaded with negative connotations for a Christian fundamentalist audience (Weasel & Jensen, 2005). In the next sentence, "harvesting" cells from "tiny beings," evokes negative images of utilitarian, science-based abortion and "baby farming" is hardly a neutral description of therapeutic cloning that Feldbaum would be likely to endorse. It is also important to note the strategic over-inflation of the "*therapy/cure*" claims to the point of curing "almost all human maladies," a relatively easy "*straw person*" to knock down.

Following Mr. Feldbaum's quote, the rest of the article is mainly constructed to rebut his claim that human cloning should be pursued because of its therapeutic potential. Immediately following Feldbaum's quote, the author responds:

But at what price? Current regulations require that scientists treat human embryos with "profound respect." By any definition, widespread cloning would make such respect impossible. Embryos by the thousands would be destroyed once the stem cells were harvested. . . Dr. Bob Scheidt, chairman of the Ethics Commission at the Christian Medical and Dental Association, believes that therapeutic cloning is "detestable" because it would treat human life merely as the means to an end: "It would surely lead to an

industry dedicated to creating human beings en masse for the purposes of enhancing the lives of other human beings."

The rest of the article offers one argument after another in opposition to cloning, calling it "the stuff of fevered imaginations," and quoting sources who call cloning, "ethically and morally reprehensible," "cloning to kill," "not only gruesome but unnecessary" and "manufacturing humanity." This kind of heavy-handed framing of the "*therapy/cure*" trope in a negative light gives it a very different look and feel in the Christian fundamentalist sample, despite the similar numerical values for each of the samples.

#### *"Babies"*

"*Babies*" is a special kind of trope, both in terms of the difficulty of detecting such latent content and in terms of understanding its subtle influence on human cloning discourse. Each sample used the "*babies*" metonym at a similar rate. However, pro-science articles frequently used "*babies*" in a very conscious attempt to address the concerns of anti-cloning rhetors. Christian fundamentalist and mainstream publications on the other hand tended to use "*babies*" as a somewhat subliminal framing device, which likely contributed to the salience of explicit and implicit abortion tropes in each of these samples. The way this pattern works is that those opposed to cloning state, for example, that cloning involves scientists making babies in a lab. A pro-cloning source will then respond to such a claim by saying, for example, "scientists 'are not making babies . . .'" (C-32). The point here is that, similar frequencies of "*babies*" tropes in each sample, the Christian fundamentalist and mainstream samples are generally the true protagonists when it comes to using this latent rhetorical device.

#### *"Christian values"*

Not surprisingly, the Christian fundamentalist sample used this code significantly more often than the other two samples ( $\chi^2 = 12.7$ ;  $p < .01$ ). As would be anticipated based on the literature, Christian fundamentalist authors justified their opposition to human cloning on the basis of biblical truth and traditional Christian values. Often these values were assumed in their use of abortion-related rhetorical devices. Given that the Christian fundamentalist sample represents fundamentalist journalists communicating to like-minded readers, assuming a baseline of shared values is natural. Furthermore, their application of those shared Christian values to abortion rhetoric in the news coverage of human cloning can be seen as but one instantiation of a larger fundamentalist pattern of applying Bible-based Christian values and beliefs to myriad contemporary problems (Grew, 1997; L. A. Jensen, 1998).

## DISCUSSION

For decades, the abortion debate has been the quintessential example of the intractable “moral conflict” in American politics (Littlejohn & Pearce, 1997). During the long periods of intractability which continue to characterize the abortion issue in the US, the unresolved moral conflicts tied to abortion may find alternative battlegrounds elsewhere in the American political landscape. The present study supports this notion, suggesting that the concerns associated with abortion are finding their way to policy debates within the increasingly contested domains of biotechnology and the life sciences. The borders of the abortion debate seems to be expanding with the prospect of new technologies such as human cloning and embryonic stem cell therapy which require the destruction or manipulation of early human embryos. In this article the use of abortion rhetoric was considered both in terms of explicit references to the abortion controversy, as well as the equally important implicit application of abortion rhetoric to the human cloning debate. The study indicates the high degree to which the abortion issue is used as the source domain for metaphorical arguments applied to human cloning (see Lakoff, 1995, 1996; Lakoff & Johnson, 1980; Steinbock, 2000; Stiltner, 2001). Clearly abortion-based reasoning was much more important to the construction of the human cloning issue within Christian fundamentalist press coverage than in science advocacy news publications.

According to DiMaggio et al. (1996), abortion is the only major social issue in America that has become more polarized between liberals and religious conservatives over the last three decades. Moreover, areas of scientific inquiry that deal with life and reproduction tend to draw the most interest and controversy from American evangelicals (Mendelsohn, 1993). Those committed to a fundamentalist Christian ideology tend to view the topic of abortion broadly, extending its borders to include a variety of reproductive issues that involve early termination of

pregnancies or the manipulation and destruction of human embryos. Both early termination of pregnancy and embryo destruction are believed by many evangelicals to be quite literal examples of murder. This view of abortion-related phenomena carries with it a very distinct epistemological approach to reproductive technologies as well as a well-developed inventory of rhetorical devices that can be used to describe these technologies. With 45% of the articles in the Christian fundamentalist news sample explicitly referencing abortion, human cloning has clearly come to be perceived as one such abortion-related technology. As such, cloning has attracted the same type of “*death*” rhetoric that characterizes much of Christian fundamentalists’ communication about abortion per se. Over time, repeated use of the conceptual metaphor “*human cloning is abortion*,” combined with a strong tendency to view human cloning as a fundamentally religious issue (Evans, 2002b), could establish the long-term rhetorical framework for large-scale political mobilization of Christian fundamentalists against any form of human cloning technology (including cloning for therapeutic or research purposes). The establishment of a strong conceptual link connecting abortion and human cloning would lead most Christian fundamentalists to the clear moral prescription for opposition to human cloning, regardless of proponents’ arguments (e.g., see Lakoff, 1995, 1996; Mio, 1997; Schön, 1993). Moreover, this rhetorical scenario is eminently transferable to other emerging biotechnologies related to the use of human embryos.

Among pro-science writers, abortion does not appear to be considered a relevant concern (e.g. only 9% of pro-science media articles contained abortion references). This may be due to a fundamental, definitional disagreement between many advocates of science and Christian fundamentalists about when human life begins. For example, Christian fundamentalist communication about human cloning which applies the concept of abortion may take on extra

persuasive power based on the strong, built-in moral component intrinsic to this conceptualization of human cloning. Social theorist Niklas Luhmann (1993: X) argues that any communication can be “moralized as long as victims can be identified.” Christian fundamentalists’ belief that a human embryo has full status as a human being enables them to identify potential “victims” of human cloning, and thus to mobilize opposition against even the more popular therapeutic, stem cell cloning. Logically, if the embryos in question are understood to be full-fledged human beings, opposition to their destruction is warranted regardless of any potential medical benefits for patients.

On the other hand, science advocates tend to see issues such as human cloning in terms of more functional questions such as whether the technology is sufficiently advanced in order to justify the risks involved in the scientific experimentation. This difficult judgment is strongly influenced by particular epistemological tendencies amongst some science advocates, who tend to privilege scientific inquiry over other forms of knowledge and believe in the unquestioned rightness of scientific research (Fuchs, 1992; Fuller, 2001). If science advocates took on a different perspective, for example by sharing most Christian fundamentalists’ belief that embryos attain their status as human beings immediately upon conception, then they would no doubt rescind support for stem-cell and therapeutic human cloning research in order to maintain cognitive consonance.

In the same manner, science advocates can maintain support for these valued biotechnologies by defining the point at which an embryo becomes a human being as sometime after scientists harvest stem cells or conduct other research at the expense of the embryo. Holding the belief that life begins at a later point in embryo or fetal development would minimize any cognitive dissonance a science advocate might feel as a result of the apparent

contradiction of destroying life in order to save it. The internal consistency of such underlying reasoning employed by both evangelicals and science advocates is seldom acknowledged in the human cloning debate because of the stark, dualistic rhetoric that is used by advocates and opponents in order to frame the issue in their favor. For example, the unequivocal moralizing of the debate by Christian fundamentalists can be viewed as a stark renouncement of willingness to communicate with those approaching human cloning from a scientific or functional perspective (Luhmann, 1993). These groups are further separated by their sharply bifurcated macro-level views on what should constitute the basis for settling bioethics debates on issues such as human cloning (e.g., Evans, 2002a; Nelkin & Lindee, 1995; van Dijk, 1998). Such basic differences in worldview guide the understanding and definition of coverage of the human cloning debate in the advocacy-based news publications for each of these groups.

This study's primary finding that abortion rhetoric is a major theme in press coverage of human cloning is concerning given the contentious and intractable nature of the abortion issue and its polarizing influence on American politics. Moreover, it is reasonable to hypothesize that abortion rhetoric will continue to expand into an even wider range of American bioethical debates, perhaps already including those connected to embryonic stem cell research, pre-implantation genetic diagnosis, and the (mis)use of unneeded, "leftover" embryos created for *in vitro* fertilization. Although these are very different issues, they are likely to face rhetoric similar to human cloning whenever their profile is raised, as in the ongoing controversy over the public funding of embryonic stem cell research in the United States. If the polarized history of the abortion debate in the US is any indication, the expansion of abortion rhetoric into the human cloning debate may be a harbinger of additional schisms and the eventual demise of any dialogue aimed at resolving the conflict in a productive manner.

However, from the perspective of encouraging productive dialogue and conflict resolution on this issue, there is a kernel of hope that can be found in the results of this study. Despite the largely divergent rhetoric and domains of meaning employed by the Christian fundamentalist and pro-science publications, the roughly equal percentages of “*therapy/cure*” and “*babies*” tropes in each of the samples indicates that these groups were at least addressing each other’s arguments. Although these tropes were often referenced as “straw” arguments only to be knocked down, this is considerably more desirable in the realm of dialogue and conflict than the much more typical political scenario in which neither side acknowledges any of the opposition’s arguments. Despite the myriad institutional, historical, and social psychological factors militating against constructive dialogue on this issue, such traces of mutual acknowledgement and parallel debate indicate a potential space for productive communication between the diverse stakeholders in the human cloning debate.



## Notes

1. The normal procedure for quantitative content analysis is to have each coder examine separate material, only having them overlap with a small sub-sample, which is used to test inter-coder reliability (e.g., see Neuendorff, 2002). Thus, in a hypothetical two-coder study of 100 newspaper articles, it would be common for each coder to read 60 articles, with ten of those articles overlapping to serve as the sample for calculating inter-coder reliability.

2. It is important to note that use of the term “therapeutic cloning” was determined *not* to be an instance of this code. Based on close scrutiny of the data, it was determined that the term “therapeutic cloning” *per se* was merely descriptive and not necessarily indicative of a belief that cloning yields therapies or is therapeutic in nature (the same applies to “reproductive cloning” and “research cloning”).

3. Average number of words per article:

Mainstream sample = 923 words

Pro-science sample = 594 words

Christian fundamentalist sample = 829 words

4. In addition to identifying occurrences of the primary codes discussed in this study, the coders were also trained to make note of occasions when a given code took on a meaning that did not match the straightforward operational definitions presented at the beginning of this study. Although these additional meanings are not directly relevant to the question of people’s *conceptual* understanding of human cloning in terms of abortion rhetoric, they are a vital component of any inquiry designed to understand *attitudes* which are expressed in the present data. The coding of such important departures from direct, explicit meaning resulted in the emergence of a “sub-code,” which is referred to in this essay as “*straw person*.” This sub-code is assigned to tropes for which the context makes it clear that the authors did not really believe the ideas they were writing. For an extreme hypothetical example: “some fools say that cloning results in the death of innocent babies, however anyone can clearly see that this is a ridiculous argument.” This would be coded as “*death*” (“*straw person*”). Whilst the need for secondary coding was negligible for the other tropes, the sub-code adds an important additional layer of meaning to “*therapy/cure*,” which was the code most characterized by a “*straw person*” meaning.

## References

- Ammerman, N. T. (1991). North American Protestant fundamentalism. In **Fundamentalisms observed** (pp. 1-65). Chicago: University of Chicago Press.
- Barr, J. (1978). **Fundamentalism**. Philadelphia: Westminster Press.
- Bartkowski, J. (1996). Beyond biblical literalism and inerrancy: Conservative Protestants and the hermeneutic interpretation of scripture. **Sociology of Religion**, 57, 259-272.
- Boone, K. (1989). **The Bible tells them so: The discourse of Protestant fundamentalism**. Albany: State University of New York Press.
- Bruce, S. (1992). Revelations: The future of the new Christian right. In L. Kaplan (Ed.), **Fundamentalism in comparative perspective** (pp. 38-73). Amherst: University of Massachusetts Press.
- DiMaggio, P., Evans J., & Bryson. (1996). Have Americans' social attitudes become more polarized? **American Journal of Sociology**, 102, 690-755.
- Evans, J. H. (2002a). **Playing God?: Human genetic engineering and the rationalization of public bioethical debate**. Chicago: University of Chicago Press.
- Evans, J. H. (2002b). Religion and human cloning: An exploratory analysis of the first available opinion data. **Journal for the Scientific Study of Religion**, 41, 747.
- Ferree, M. M., Gamson, W. A., Gerhards, J., & Rucht, D. (2002). **Shaping abortion discourse: Democracy and the public sphere in Germany and the United States**. Cambridge: Cambridge University Press.
- Fuchs, S. (1992). **The professional quest for truth: A social theory of science and knowledge**. Albany, NY: State University of New York Press.
- Fuller, S. (2001). The reenchantment of science: A fit end to the science wars? In K. A. P. Baringer (Ed.), **After the science wars** (pp. 183-208). New York: Routledge.
- Grew, R. (1997). On seeking the cultural context of fundamentalism. In M. E. Marty & R. S. Appleby (Eds.), **Religion, ethnicity, and self-identity: Nations in turmoil** (pp. 19-34). Hanover, NH: University Press of New England.
- Grice, H. P. (1975). Logic and conversation. In P. E. Cole & J. Morgan (Eds.), **Syntax and semantics** (Vol. 13, pp. 41-58). London: Academic Press.
- Hopson, R. E., & Smith, D. R. (1999). Changing fortunes: An analysis of Christian Right ascendance within American political discourse. **Journal for the Scientific Study of Religion**, 38, 1-14.
- Jensen, E. (In press). The Dao of human cloning: Hope, fear and hype in the UK press and popular films. **Public Understanding of Science**.
- Jensen, L. A. (1998). Moral divisions within countries between orthodoxy and progressivism: India and the United States. **Journal for the Scientific Study of Religion**, 37, 90-108.
- Lakoff, G. (1993). The contemporary theory of metaphor. In A. Ortony (Ed.), **Metaphor and Thought** (2nd ed., pp. 202-251). Cambridge, England: Cambridge University Press.
- Lakoff, G. (1995). Metaphor, morality, and politics, or why conservatives have left liberals in the dust. **Social Forces**, 62, 177-214.
- Lakoff, G. (1996). **Moral politics: What conservatives know that liberals don't**. Chicago: University of Chicago Press.
- Lakoff, G., & Johnson, M. (1980). **Metaphors we live by**. Chicago: University of Chicago Press.
- Lanham, R. A. (1991). **A handlist of rhetorical terms**. Berkeley: University of California Press.

- Lehmann, D. (1998). Fundamentalism and globalism. **Third World Quarterly**, 19, 607-635.
- Littlejohn, S., & Pearce, W. (1997). **Moral conflict: When social worlds collide**. Thousand Oaks, CA: Sage.
- Lombard, M., Snyder-Duch, J., & Bracken, C. C. (2002). Content analysis in mass communication: Assessment and reporting of intercoder reliability. **Human Communication Research**, 28, 587-604.
- Luhmann, N. (1993). **Risk: A sociological theory** (R. Barrett, Trans.). New York: Aldine de Gruyter.
- Maxwell, C. J. C. (2002). **Pro-life activists in America: Meaning, motivation, and direct action**. Cambridge: Cambridge University Press.
- Maxwell, T. P. (2003). Integral spirituality, deep science, and ecological awareness. **Zygon**, 38, 257-276.
- McManus, J. (1994). **Market-driven journalism: Let the buyer beware?** Thousand Oaks, CA: Sage Publications.
- McManus, J. (1995). A market-based model of news production. **Communication Theory**, 5, 301-338.
- Mendelsohn, E. (1993). Religious fundamentalism and the sciences. In M. E. Marty & R. S. Appleby (Eds.), **Fundamentalisms and society** (pp. 23-41). Chicago: University of Chicago Press.
- Mio, J. S. (1997). Metaphor and politics. **Metaphor and Symbol**, 12, 113-133.
- Morgan, D. L. (1998). Practical strategies for combining qualitative and quantitative methods: Applications to health research. **Qualitative Health Research**, 8, 362-376.
- Morgan, D. L. (in press). **Combining qualitative and quantitative methods: Practical strategies**. Thousand Oaks, CA: Sage.
- Nelkin, D., & Lindee, M. S. (1995). **The DNA mystique: The gene as cultural icon**. New York: W.H. Freeman & Co.
- Nelkin, D., & Lindee, M. S. (2001). Cloning in the popular imagination. In A. J. Klotzko (Ed.), **The cloning sourcebook**. New York: Oxford University Press.
- Nerlich, B., Clarke, D., & Dingwall, R. (2000). Clones and Crops: The use of stock characters and word play in two debates about bioengineering. **Metaphor and Symbol**, 15, 223-239.
- Neuendorff, K. (2002). **The content analysis guidebook**. Thousand Oaks, CA: Sage Publications.
- Patton, M. Q. (1988). Paradigms and pragmatism. In D. Fetterman (Ed.), **Qualitative approaches to evaluation in education: The silent scientific revolution** (pp. 116-137). New York: Praeger.
- Priest, S. H. (2001). Cloning: A study in news production. **Public Understanding of Science**, 10, 59-69.
- Reichardt, C. S., & Cook, T. D. (1979). Beyond qualitative versus quantitative methods. In T. D. C. C. S. Reichardt (Ed.), **Qualitative and quantitative methods in evaluation research** (pp. 7-31). Beverly Hills, CA: Sage.
- Ritchie, D. (2003). 'Argument is war' - Or is it a games of chess? Multiple meanings in the analysis of implicit metaphors. **Metaphor and Symbol**, 18, 125-146.
- Schön, D. (1993). Generative metaphor: A perspective on problem-setting in social policy. In A. Ortony (Ed.), **Metaphor and Thought** (2 ed., pp. 137-163). Cambridge, England: Cambridge University Press.

- Sperber, D., & Wilson, D. (1986). **Relevance: Communication and cognition**. Cambridge, MA: Harvard University Press.
- Steinbock, B. (2000). Human cloning: Sorting through the ethical issues. In B. MacKinnon (Ed.), **Human cloning: Science, ethics, and public policy**. Urbana, IL: University of Illinois Press.
- Stiltner, B. (2001). Morality, religion, and public bioethics: Shifting the paradigm for the public discussion of embryo research and human cloning. In P. Lauritzen (Ed.), **Cloning and the future of human embryo research** (pp. 178-200). New York: Oxford University Press.
- Strauss, A., & Corbin, J. (1990). **Basics of qualitative research: Grounded theory procedures and techniques**. Newbury Park, CA: Sage.
- Strauss, A., & Corbin, J. (1998). **Basics of qualitative research: Techniques and procedures for developing grounded theory**. Thousand Oaks, CA: Sage Publications.
- Tindall, C. (1994). Issues of evaluation. In P. Banister, E. Burman, I. Parker, M. Taylor & C. Tindall (Eds.), **Qualitative methods in psychology: A research guide** (pp. 142-154). Buckingham, England: Open University Press.
- van Dijk, J. (1998). **Imagination: Popular Images of Genetics**. New York: NYU Press.
- Vervaeke, J., & Kennedy, J. M. (1996). Metaphors in language and thought: Falsification and multiple meanings. **Metaphor and Symbolic Activity**, 11, 273-284.
- Weasel, L. H., & Jensen, E. (2005). Language and values in the human cloning debate: A web-based survey of scientists and Christian fundamentalist pastors. **New Genetics & Society**, 24, 1-14.
- Wilcox, C. (2000). **Onward Christian soldiers? The religious right in American politics** (2nd ed.). Boulder, CO: Westview Press.
- Woodberry, R. D., & Smith, C. S. (1998). Fundamentalism et al: Conservative protestants in America. **Annual Review of Sociology**, 24, 25-56.